

*Commonwealth of Virginia
Department of Environmental Quality*

***Maintenance Plan for
The
Hampton Roads Nonattainment Area
Consisting Of The Cities of
Chesapeake, Hampton, Newport
News, Norfolk, Poquoson, Suffolk,
Virginia Beach, and Williamsburg and
The Counties of James City, York,
Gloucester, and Isle of Wight***

Final

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Commonwealth of Virginia

State Implementation Plan Revision for the Maintenance of Air Quality in the Hampton Roads Ozone Nonattainment Area

1. Background

The redesignation process provides that a state may petition EPA to redesignate a nonattainment area as attainment and EPA may approve the redesignation subject to certain criteria being met. Section 107(d)(3)(E) stipulates one of these criteria, that EPA must fully approve a maintenance plan that meets the requirements of Section 175A. A state may submit both the redesignation request and the maintenance plan at the same time, and rulemaking on both may proceed on a parallel track. All applicable nonattainment area requirements remain in place. The maintenance plan constitutes a SIP revision, and must provide for maintenance of the relevant NAAQS in the area for at least 10 years after redesignation, including additional measures to ensure prompt correction of any violation of the NAAQS. The state must also submit a SIP revision 8 years after the original redesignation request is approved to provide for maintenance of the NAAQS for an additional 10 years following the first 10-year period.

EPA requires the following provisions to ensure maintenance of the NAAQS:

- The state must develop an attainment emissions inventory to identify the level of emissions in the area which is sufficient to attain the NAAQS.
- A state may generally demonstrate maintenance by showing that future emissions of a pollutant or its precursors will not exceed the level of the attainment inventory over the 10-year period following redesignation.
- Once an area has been redesignated, the state must continue to operate an appropriate air quality monitoring network in order to verify the area's attainment status.
- The state must ensure that it has the legal authority to implement and enforce all measures necessary to attain and maintain the NAAQS. Continued attainment must be verified by the state by indicating how maintenance plan progress will be tracked.
- Contingency measures must be available to promptly correct any NAAQS violation.

This maintenance plan for the 8-hour ozone standard supersedes the previous maintenance plan that was designed to maintain compliance in this region with the revoked 1-hour ozone standard. However, it is worth noting that this plan allows no backsliding of any requirements in the previous 1-hour ozone standard maintenance plan.

2. Previous Planning Requirements

Under the 1-hour ozone standard requirements, the Hampton Roads area was originally designated a marginal nonattainment area. The area's air quality improved, and a redesignation request and maintenance plan were sent to EPA and approved on June 26, 1997. This maintenance plan contained area wide emissions caps, mobile source budgets, and contingency measures. Additionally, this maintenance plan needs to be updated and resubmitted approximately 10 years after approval.

The Commonwealth is requesting that all portions of the 1-hour maintenance plan be superseded with the requirements listed in this 8-hour maintenance plan. This request includes the removal of the obligation to implement the 1-hour ozone contingency plan upon a violation of the 1-hour ozone standard for the Hampton Roads area. Once EPA approves the 8-hour ozone contingency plan, the need for contingency measures will be activated only in the event that a violation of the 8-hour ozone standard occurs at a monitor located in the Hampton Road monitoring network.

The Commonwealth is also requesting that the area wide emissions caps and mobile source budgets listed in the 1-hour ozone maintenance plan be superseded with the area wide emissions caps and mobile source budgets listed in this 8-hour ozone maintenance plan.

Lastly, the Commonwealth is requesting that EPA approve this 8-hour maintenance plan as meeting the requirements of CAA section 175(A)b with respect to the 1-hour ozone maintenance plan update.

3. Virginia's Approach

Virginia has developed a maintenance plan that meets all EPA requirements and demonstrates that, because of permanent and enforceable measures, emissions over the 10 years following redesignation approval will remain below the 2005 attainment year levels while allowing for growth in population and vehicle miles traveled. The period covered by this maintenance plan is 2005-2018.

The state has developed an emissions inventory in accordance with EPA guidance that identifies the level of emissions sufficient to achieve the NAAQS. The attainment inventory consists of the actual emissions for a year during the three-year period associated with the monitoring data showing attainment of the ozone standard, that is, 2005. The plan includes a demonstration that emissions will remain within the 2005 levels for a 10-year period by keeping in place key elements of the current federal and state regulatory programs and putting in place additional controls.

The programs which are currently in effect are as follows:

- The National Low Emission Vehicle (NLEV) program;
- Open burning restrictions for James City, York, Chesapeake, Hampton, Newport News, Norfolk, Poquoson, Portsmouth, Suffolk, Virginia Beach, and Williamsburg;
- Control Technology Guideline (CTG) Reasonably Available Control Technology (RACT) requirements for James City, York, Chesapeake, Hampton, Newport News, Norfolk, Poquoson, Portsmouth, Suffolk, Virginia Beach, and Williamsburg;
- Stage I vapor recovery requirements for James City, York, Chesapeake, Hampton, Newport News, Norfolk, Poquoson, Portsmouth, Suffolk, Virginia Beach, and Williamsburg
- Reformulated gasoline requirements for James City, York, Chesapeake, Hampton, Newport News, Norfolk, Poquoson, Portsmouth, Suffolk, Virginia Beach, and Williamsburg;
- Motor vehicle fleet turnover with new vehicles meeting the Tier 2 standards; and
- Low sulfur gasoline.

Additionally, the following programs are in place and are either effective or due to become effective:

- Heavy duty diesel on road (2004/2007) and non-road emissions standards (2008); and

- Low sulfur on-road (2006) and off-road diesel fuel (2007/2010).

Lastly, to further improve air quality and to provide room for industrial and population growth while maintaining emissions in the area to less than 2005 levels, the Commonwealth of Virginia has completed rulemaking to implement the following programs:

- Implement the Stage I requirements of 9 VAC 5 Chapter 40, Article 37 in Isle of Wight and Gloucester;
- Implement existing source CTG RACT requirements of 9 VAC 5 Chapter 40, Articles 5-6, 24-36, and 39 in Isle of Wight and Gloucester.

During the public comment period for the maintenance plan, comments were received concerning the expansion of the open burning restriction requirements of 9 VAC 5 Chapter 40, Article 40 in Isle of Wight and Gloucester. The comments suggested that for Isle of Wight and Gloucester implementation of the open burning regulation should be delayed so that the regulation will not go into effect in the summer of 2007. These comments have been examined, and in response, the Virginia State Air Pollution Control Board will be petitioned to allow a variance for the open burning regulation such that the regulation will not be implemented in Gloucester and Isle of Wight until May, 2009. The purpose of this variance is to allow the local jurisdictions time to ensure that all local regulations and ordinances support alternative methods of wood disposal. No effect on the emissions inventory or ability of the maintenance area to meet its attainment goals is anticipated as a result of this action.

Virginia will continue to operate and maintain its air quality monitoring network. The Commonwealth of Virginia has the legal authority to implement and enforce specified measures necessary to attain and maintain the NAAQS.

In addition to maintaining key elements of its regulatory program, the state will acquire air quality and source emissions data to track attainment and maintenance. The maintenance plan includes contingency measures, as necessary, to promptly correct any NAAQS violation that occurs after redesignation of the area. These include implementation of area source VOC controls, implementation of non-CTG VOC RACT, or implementation of non-CTG NO_x RACT.

EPA's requirements, and a description of how Virginia intends to fulfill these requirements, follow.

4. Attainment Inventory

4.1. EPA Requirements

The state must develop an attainment emissions inventory to identify the level of emissions sufficient to achieve the NAAQS. This inventory should be consistent with EPA's most recent guidance on emission inventories for nonattainment areas available at the time, and should include emissions during the time period associated with the monitoring data showing attainment of the ozone NAAQS. Where the state has made an adequate demonstration that air quality has improved as a result of the SIP, the attainment inventory will generally be the actual inventory during the time period the area attained the standard. The inventory must be based on "typical summer day" emissions of VOCs, NO_x and carbon monoxide (CO) during the attainment year.

4.2. Virginia's Approach

The state has developed an attainment year emissions inventory that identifies the level of emissions

sufficient to achieve the NAAQS. The attainment inventory consists of the actual emissions for the year during the three-year period associated with the monitoring data showing attainment of the ozone standard, that is, 2005. The 2005 inventory is appropriate to use because it represents the typical inventory for the three-year period demonstrating attainment of the standard. The 2005 inventory is consistent with EPA guidance, is based on "typical summer day" emissions of VOCs, NO_x, and CO during 2005, and consists of a list of sources and emissions in tons per day. A detailed description of the procedures used to develop the attainment year inventory is contained in the Technical Support Document. It should be noted that CO emissions calculations are necessary to create a 2005 inventory and area wide cap but are not intended to and do not represent or establish a CO mobile source budget for conformity purposes.

**Table 4.2-1
2005 Attainment Year Inventory**

Pollutant	Point	Area	NonRoad	Mobile	Total
VOC	20.091	91.980	42.320	50.591	204.982 tons/day
NO_x	62.536	55.207	30.208	78.169	226.120 tons/day
CO⁽¹⁾	91.306	56.555	417.125	642.103	1207.089 tons/day

⁽¹⁾The total for CO for mobile sources represents an inventory amount only. It is not intended to be and does not represent or establish a budget for conformity purposes.

5. Maintenance Demonstration

5.1. EPA Requirements

A state may demonstrate maintenance of the NAAQS by showing that future emissions of a pollutant or its precursors will not exceed the level of the attainment inventory. The demonstration should be for a period of 10 years following the redesignation. The projected inventory should consider future growth, including population and industry. It should also be consistent with the attainment inventory, and it should document data inputs and assumptions. All elements of the demonstration should be consistent with current EPA guidance. Enforceability through regulations must also be demonstrated.

Any assumptions concerning emission rates must reflect permanent, enforceable measures. A state generally cannot take credit for reductions unless there are regulations in place requiring those reductions or the reductions are otherwise shown to be permanent. Therefore, the state is expected to maintain its implemented control strategy despite redesignation to attainment, unless such measures are shown to be unnecessary for maintenance or are replaced with measures that achieve equivalent reductions. Emission reductions from source shutdowns can be considered permanent and enforceable to the extent that those shutdowns have been reflected in the SIP and all applicable permits have been modified accordingly.

5.2. Virginia's Approach

Table 5.2-1 demonstrates how future emissions of VOCs, NO_x, and CO will not exceed the level of Virginia's attainment inventory for a 10-year period following redesignation. The projected emissions reflect the expected ozone season daily emissions based on the best available growth rates and projections (see Table 5.2-2).

**Table 5.2-1
Hampton Roads Area VOC, NO_x, and CO Emissions from 2005 to 2018**

Volatile Organic Compounds (VOC) in Tons/Day					
Year	Point	Area ¹	Nonroad	Mobile ³	Total (tons/day)
Year 2005	20.091	91.980	42.320	50.591	204.982
Year 2011	23.280	100.960	33.912	37.846	195.998
DIFF. (05-11)	3.189	8.980	-8.408	-12.745	-8.984
Year 2018	26.700	112.790	31.315	27.574	198.379
DIFF. (05-18)	6.609	20.810	-11.005	-23.017	-6.603
Nitrogen Oxides (NO_x) in Tons/Day					
Year	Point	Area ²	Nonroad	Mobile ³	Total
Year 2005	62.536	55.207	30.208	78.169	226.120
Year 2011	69.333	56.974	29.116	50.387	205.810
DIFF. (05-11)	6.797	1.767	-1.092	-27.782	-20.310
Year 2018	75.241	60.105	23.093	31.890	190.329
DIFF. (05-18)	12.705	4.898	-7.115	-46.279	-35.791

Table 5.2-1, Continued
Hampton Roads Area VOC, NO_x, and CO Emissions from 2005 to 2018

Carbon Monoxide⁴ (CO) in Tons/Day					
Year	Point	Area	Nonroad	Mobile	Total
Year 2005	91.306	56.555	417.125	642.103	1207.089
Year 2011	95.066	59.568	445.663	449.703	1050.000
DIFF. (05-11)	3.760	3.013	28.538	-192.400	-157.089
Year 2018	99.407	65.457	480.778	406.251	1051.893
DIFF. (05-18)	8.101	8.902	63.653	-235.852	-155.196

¹Includes vehicle refueling emissions and the benefits of selected local controls (Stage I, CTG RACT, and open burning). Also includes site/project specific emissions estimates and projections.

²Includes selected local controls (open burning). Also includes site/project specific emissions estimates and projections.

³Includes conformity buffers identified in Table 5.2.1-1.

⁴Carbon monoxide emissions from mobile sources are shown to provide the basis for the maintenance year cap and the annual maintenance demonstration. The CO emissions from this area will be capped at 2005 levels. However, the CO mobile source emissions listed above are not intended to be and do not represent or establish a mobile source emissions budget for conformity purposes.

Table 5.2-2.
Growth Assumptions Used In Emission Inventory Projections¹

Category	Level of Detail	Source
Stationary (Industrial) Source Growth ²	Source/Process Specific	E-GAS
Area and Non-Road Mobile Source Growth ³	Category Specific	BEA
Vehicle Miles Traveled Growth ⁴	County/Road Class Specific	VDOT

¹This table contains summary growth rate level of detail and source information. Detailed information concerning the actual growth factors and procedures used to develop the emissions projections in the maintenance plan can be found in the technical support document.

²Growth factors developed using the EPA Economic Growth Analysis System (E-GAS) which produces source and process specific growth factors based on leading economic indicators such as earnings and production forecasts.

³Individual sub-category growth projections were developed using surrogate activity growth rates published by the U.S. Bureau of Economic Analysis (i.e., population, employment, housing, etc.).

⁴Individual growth rates by jurisdiction and road class were provided by the Virginia Department of Transportation (VDOT). These factors were developed using the area's official transportation model (MINUTP). This is the same model used for transportation conformity.

Mobile source emissions were calculated using EPA's MOBILE6.2 mobile source inventory model. The Virginia Department of Transportation provided daily vehicle miles traveled (DVMT), average speed data for each road type by jurisdiction, and annual growth rates that were used to forecast DVMT into the future. Also, the Virginia Department of Motor Vehicles provided registration data that was specific to each jurisdiction.

Mobile source emission projections include the National Low Emission Vehicle Program (NLEV), the 2004 Tier 2 and Low Sulfur Gasoline Rule, the 2004 and 2007 Heavy-Duty Diesel Vehicle Rules, and the 2006 Low Sulfur Diesel Rule. In addition, James City, York, Chesapeake, Hampton, Newport News, Norfolk, Poquoson, Portsmouth, Suffolk, Virginia Beach, and Williamsburg were modeled with Phase II Reformulated Gasoline (RFG) while Gloucester and Isle of Wight were modeled with conventional gasoline fuel.

Non-road emissions were calculated using EPA's NONROAD2004 model, version 2.2.0, which incorporates the projected emission reductions resulting from EPA's Clean Air Nonroad Diesel Rule adopted last May 2004.

5.2.1. Mobile Source Emissions Budgets

As is the case for ozone nonattainment plans, the maintenance plan establishes on-road mobile source emissions budgets for VOCs and NO_x. These budgets represent the level of mobile source emissions that can be emitted in the area while supporting the air quality plan. The mobile source budgets established by this plan are presented in Table 5.2.1-1. For VOCs and NO_x, initial, interim and final mobile source budgets have been developed to accommodate the fluctuation in mobile source emissions estimates over time. In the near term, mobile source emissions are rapidly decreasing due to the implementation of the NLEV, Tier 2, and HDDV rules, even as VMT continues to grow. Once these rules have sufficiently penetrated the fleet, growth in VMT becomes more pronounced and eventually pushes mobile emissions back on an upward trend. To allow the area to demonstrate conformity of its transportation plans in early TIP evaluation years within the maintenance period, a higher initial budget (set at 2005 levels) has been established which will be in effect from the beginning of the maintenance period through 2011. Beginning in 2011, the interim emissions budget comes into effect and remains through 2017. Finally, in 2018 the final maintenance plan budget comes into effect and will remain in place until such time as a new budget is established. The interim mobile source budgets for NO_x and VOC include a safety margin of 1 ton VOC/day and 3 tons NO_x/day to accommodate updated planning assumptions and estimates for the conformity and maintenance processes. The final mobile source budgets also include a safety margin of 1 ton VOC/day and 3 tons NO_x/day. Again, the final mobile source budget safety margins will help to take into account updated planning assumptions. These safety margins will facilitate conformity determinations in the "out" years past 2018, where VOC emissions from the Hampton Roads area mobile source category will eventually be rising due to increases in VMT and population. These safety margins were taken from the surplus of emission reductions below the attainment year cap.

**Table 5.2.1-1.
Maintenance Plan On-Road Mobile Source Emissions Budgets**

Year	VOC Emissions (tpd)	NO _x Emissions (tpd)
2005 Attainment Year	50.591 tons/day	78.169 tons/day
2011 Predicted Emissions	36.846 tons/day	47.387 tons/day
Conformity Buffers	1.000 ton/day	3.000 tons/day
2011 Interim Budget Year	37.846 tons/day	50.387 tons/day
2018 Predicted Emissions	26.574 tons/day	28.890 tons/day
Conformity Buffers	1.000 ton/day	3.000 tons/day
2018 Final Budget	27.574 tons/day	31.890 tons/day

5.2.2. Control Measure Emission Reductions

Point and area source emission projections assume controls on emissions from certain source categories

by federal requirements, CTG RACT, Stage I vapor recovery, the use of RFG, and open burning restrictions. The point source growth rate was determined using the EPA developed and approved Economic Growth Analysis System (E-GAS) along with industry and source-specific growth estimates in selected cases. Table 5.2.2-1 contains a summary of the emission control measures and reductions included in the plan. A detailed description of the growth factors and procedures used to develop these data may be found in the Technical Support Document.

**Table 5.2.2-1.
Maintenance Plan Control Measures and Emission Reductions**

Emission Control Measure	Emissions Reductions (tons/day)	
	2011	2018
Volatile Organic Compounds (VOC)		
Tier 2/Low Sulfur Gasoline Rule	1.925 tons/day	4.168 tons/day
2007 On Road Diesel Engine Rule	0.071 tons/day	0.187 tons/day
Vehicle Vapor Recovery	2.622 tons/day	3.547 tons/day
Federal Nonroad Engine/Equipment Rules	8.406 tons/day	11.298 tons/day
Stage I Vapor Recovery	0.729 tons/day	0.723 tons/day
CTG RACT	0.827 tons/day	0.966 tons/day
RFG	5.228 tons/day	3.581 tons/day
Open burning restrictions	0.245 tons/day	0.282 tons/day
Total VOC Reductions:	20.053 tons/day	24.752 tons/day
Nitrogen Oxides (NO_x)		
Tier 2/Low Sulfur Gasoline Rule	11.199 tons/day	20.884 tons/day
2007 On Road Diesel Engine Rule	5.159 tons/day	12.934 tons/day
Reformulated gasoline (on-road)	0.328 tons/day	0.243 tons/day
Federal Nonroad Engine/Equipment Rules	4.995 tons/day	11.019 tons/day
Open Burning Restrictions	0.051 tons/day	0.059 tons/day
Total NO _x Reductions:	21.732 tons/day	45.139 tons/day
Carbon Monoxide (CO)		
Tier 2/Low Sulfur Gasoline Rule	30.129 tons/day	59.970 tons/day
2007 On Road Diesel Engine Rule	1.829 tons/day	3.645 tons/day
Reformulated gasoline (On-Road)	26.933 tons/day	23.280 tons/day
Total CO Reductions:	58.891 tons/day	86.895 tons/day

Please note that due to the limitations of the EPA models used to develop some of these estimates, the reductions identified differ in what they represent. Some, like the federal vehicle and nonroad estimates, represent reductions from the attainment (2005) estimates. Others, like the local controls, are estimates from uncontrolled emission estimates during the selected projection years. Therefore, the reduction totals presented here do not exactly match the overall area reductions predicted in this maintenance plan and used for the maintenance emission tests. The calculations detailing methodology may be found in the Technical Support Document.

6. Air Quality Monitoring Network

6.1. EPA Requirements

Once an area has been redesignated, the state must continue to operate an appropriate air quality monitoring network in accordance with 40 CFR Part 58, to verify the area's attainment status. In cases where measured mobile source parameters (for example, vehicle miles traveled) have changed over time, the state may also need to perform a saturation monitoring study to determine the need for and location of additional permanent monitors.

6.2. Virginia's Approach

Virginia will continue to operate and maintain its air quality monitoring network. Should measured mobile source parameters change significantly over time, the state will perform a saturation monitoring study to determine the need for and location of additional permanent monitors.

7. Verify Continued Attainment

7.1. EPA Requirements

The state must ensure that it has the legal authority to implement and enforce all measures necessary to attain and maintain the NAAQS. Sections 110(a)(2)(B) and (F) of the Act, and regulations promulgated in 40 CFR 51.110(k) suggest that one such measure is the acquisition of air quality and source emission data to demonstrate attainment and maintenance. The state submittal must indicate how the state will track the progress of the maintenance plan. This is necessary due to the fact that the emission projections made for the maintenance demonstration depend on assumptions of point, area, and mobile source growth.

One option for tracking the progress of the maintenance demonstration would be for the state to periodically update the emissions inventory. In this case, the maintenance plan should specify the frequency of any planned inventory updates. Such an update could be based, in part, on the annual update of the EPA Aerometric Information Retrieval System (AIRS) and could indicate new source growth and other changes from the attainment inventory (such as changes in vehicle miles traveled or in traffic patterns). As an alternative to a complete update of the inventory, the state may choose to do a comprehensive review of the factors that were used in developing the attainment inventory to show no significant change. If this review does show a significant change, the state should then perform an update of the inventory.

7.2. Virginia's Approach

The Commonwealth of Virginia has the legal authority to implement and enforce specified measures necessary to attain and maintain the NAAQS. Key regulatory elements that the state will keep in place to maintain attainment are as follows:

- Existing source regulatory program requiring controls for certain source types for which EPA has defined reasonably available control technology in guideline documents (CTG RACT). These were in place in James City, York, Chesapeake, Hampton, Newport News, Norfolk, Poquoson, Portsmouth, Suffolk, Virginia Beach, and Williamsburg. They will be expanded to Gloucester and Isle of Wight.
- Requirement for vapor recovery controls for emissions from filling of underground storage tanks at gasoline service stations (Stage I). Stage I controls were required in James City, York, Chesapeake, Hampton, Newport News, Norfolk, Poquoson, Portsmouth, Suffolk, Virginia Beach, and Williamsburg. Stage I will be expanded into Gloucester and Isle of Wight.
- Open Burning Restrictions. These control measures were previously in place in James City, York, Chesapeake, Hampton, Newport News, Norfolk, Poquoson, Portsmouth, Suffolk, Virginia Beach, and Williamsburg. They will be expanded into Gloucester and Isle of Wight.

In addition to maintaining key elements of its regulatory program in place, the state will acquire ambient and source emission data to track attainment and maintenance.

Virginia will track the progress of the maintenance demonstration by periodically updating the emissions inventory. This tracking will consist of annual and periodic evaluations. The annual evaluation will consist of checks on key emissions trend indicators such as the annual emissions update of stationary sources, the Highway Performance Monitoring System (HPMS) vehicle miles traveled data reported to the Federal Highway Administration, and other growth indicators. These indicators will be compared to the growth assumptions used in the plan to determine if the predicted versus the observed growth remains relatively constant. The state will also develop and submit to EPA comprehensive tracking inventories every three years during the maintenance plan period, beginning in 2005. For the purpose of performing this tracking function for point sources, the state will retain the annual emission statement requirements for the maintenance area (9 VAC 5-20-160).

The state will report the results of this tracking program to EPA every three years.

8. Contingency Measures

8.1. EPA Requirements

The maintenance plan must include contingency measures, as necessary, to promptly correct any NAAQS violation that occurs after redesignation of an area. It should include measures to be adopted, a schedule and procedures for adoption and implementation, and a specific time limit for action. Specific triggers that would put the plan into motion must be identified. This plan is considered to be an enforceable part of the SIP and should ensure that the contingency measures are adopted explicitly once they are triggered.

8.2. Virginia's Approach

The ability of the Hampton Roads nonattainment area to stay in compliance with the ozone standard after redesignation depends largely on the level of VOC and NO_x emissions in the region. Emissions are projected to decrease or stay below 2005 levels through the year 2018. However, if emissions do not decrease as expected, or if emissions increase, the area may experience ozone violations.

Because future ozone violations are related to future emission levels, the state has developed contingency measures for the maintenance SIP revisions that address two situations.

The first situation would be an actual increase of the VOC, NO_x, or CO emissions above the regional emissions budget which would be identified or predicted through the development of the comprehensive periodic tracking inventories. As stated earlier, the Department of Environmental Quality will monitor the observed growth rates for vehicle miles traveled, population, and point source VOCs, NO_x, and CO emissions on a yearly basis which will serve as a reality check and early warning indicator. Comprehensive tracking inventories will also be developed every three years using current EPA-approved methods to estimate emissions, concentrating on areas identified in the less rigorous yearly evaluations as being potential problems. If the regional emissions budget for one or more of the pollutants of concern is exceeded, appropriate contingency measures will be implemented according to this section.

The second situation is monitored ozone violations. The Department of Environmental Quality will rely on recorded ozone readings to determine whether violations have occurred. If a violation (any 3 year average of each annual fourth highest 8-hour average) of the ozone air quality standard of 0.08 parts per million occurs, the mandatory contingency measures will be implemented according to Section 8.3.2.

Virginia agrees to expeditiously implement the following contingency measures, on a schedule as described in Section 8.3.4, in response to future VOC and NO_x emission increases or ozone violations that occur after EPA approval of the plan, as defined in each scenario below. The state's obligation under these provisions is subject to state administrative law and, as applicable, any necessary legal authorizations prior to implementation.

8.3. Specific Contingency Measures

8.3.1. For VOC and NO_x Emissions Above the Regional Emissions Budget

In the event that VOC or NO_x emissions exceed the regional emissions budget, VDEQ – Air Division will prepare a complete VOC and NO_x emission inventory. If the complete VOC and NO_x emission inventory continues to demonstrate that the regional emissions caps have been exceeded, VDEQ – Air Division will implement one or more control strategies that are currently not in place from Table 8.3.2-1.

8.3.2. For a Violation of the Ozone Standard

In the event that a violation of the ozone standard occurs at a monitor located in the Hampton Roads monitoring network, the VDEQ – Air Division will implement two control strategies from Table 8.3.2-1.

**Table 8.3.2-1
Maintenance Plan Contingency Measure Choices**

Control Strategy	Description
9 VAC 5 Chapter 40, Article 42	Emission Standards for Portable Fuel Container Spillage
9 VAC 5 Chapter 40, Article 47	Emission Standards for Solvent Metal Cleaning Operations
9 VAC 5 Chapter 40, Article 48	Emission Standards for Mobile Equipment Repair and Refinishing Operations
9 VAC 5 Chapter 40, Article 49	Emission Standards for Architectural and Industrial Maintenance Coatings
9 VAC 5 Chapter 40, Article 50	Emission Standards for Consumer Products
9 VAC 5-40-300 of 9 VAC 5 Chapter 40, Article 4	General Process Operations – Standard for Volatile Organic Compounds (non-CTG RACT for major sources)
9 VAC 5-40-310 of 9 VAC 5 Chapter 40, Article 4	General Process Operations – Standard for Nitrogen Oxides (non-CTG RACT for major sources)

8.3.3. For a Violation of the Ozone Standard in Any Subsequent Ozone Season

In the event that a violation of the ozone standard occurs in the Hampton Roads monitoring network following the implementation of section 8.3.2 and in any subsequent ozone season, two additional control strategies from Table 8.3.2-1 will be implemented.

8.3.4. Schedule

The following schedule applies to the contingency measures concerning non-CTG RACT requirements and the area source VOC regulations:

- Notification received from EPA that a contingency measure must be implemented, or three months after a recorded violation.
- Applicable regulation to be adopted 6 months after this date.
- Applicable regulation to be implemented 6 months after adoption.
- Compliance with regulation to be achieved within 12 months of adoption.